

A Study of Cancer of Ovaries among Women and it's Linked with the Stem Cells present in Body: A Review

SAIRA JOHN¹, NICKSON SUBESTON ANTHONY², SHEES BAZR BHATTI³

¹Nursing Lecturer, Doctor Hospital College of Nursing

²Academic Director, Doctor Hospital College of Nursing

³Charge Nurse, Mayo Hospital Lahore

Correspondence to: Saira John, Email: Sairajohn93@gmail.com, Cell: 03080816638

ABSTRACT

Background: Ovarian cancer (OC) is the seventh most commonly diagnosed cancer among women in the world. A woman's lifetime risk of developing OC is 1 in 75, and her chance of dying of the disease is 1 in 100. Cells which initiate cancer cells in the body are somehow known as stem cells.

Objective: The objective of this review was to evaluate the published literature on epidemiologic risk factors for ovarian cancer among women and it's linked with the stem cells present in the body.

Material and methods: A review of literature search was conducted in PubMed and Scopus. Studies comparing ovarian cancer among women and its linked with the stem cells present in the body were included.

Results: Eight of 94 articles met the inclusion criteria. The articles revealed that there are no rules to separate out the cells which are spreading tumor cells or in short from this research they said that we are not able to separate them out but we can clarify the issue that either they are spreading this deadly disease or not. Stem cells are not linked with ovarian cancer.

Conclusion: It is concluded that phonetically both cancer cells and stem cells are not same. They are showing their opposite impacts. In this study we have seen that first they initiate from a single cell and then start replicating and make groups. There are many other ways through which tumor cells can generate themselves so it is not easy to say that they are growing from stem cells.

Keywords: Ovarian cancer, Stem cells and Women

INTRODUCTION

In the western countries, cancer of ovaries in females is increasing more rapidly and lead to malignant tumor [1]. About 80-90% of stem cells or tumor cells are present on the epithelium cells or tissues [2]. They many start generating on even a small, single layer of epithelial or on the tube which is present in ovary [3]. In most of the cases, ovarian tubes or ovaries got torn up at the time of ovulation.

These cells are resistant to chemicals and their therapies. In the last few years, about 68-70% ladies were those who was suffering from ovarian cancer [4]. They got different symptoms are feeling pain in their intestines, vomits, morning sickness, abdominal pains etc. [5]. They were not aware that these are symptoms of ovary cancer, they were taking it as minor disease and was taking normal medication for this [6]. In the past few years, ratio of successful treatment and cure from this disease was just 55% because as we have discussed that they were resistant to chemical therapies [7]. Stem cells get generated by itself and start replicating them and increasing the level of tumor in the ovary [8].

METHODOLOGY

A review of literature search was conducted in PubMed and Scopus. Studies comparing ovarian cancer among women and its linked with the stem cells present in the body were included. An effective tissue accumulates and gradually formed malignant tumor. These tumors are significantly formed. These cells at the start of accumulation, they do not have to ability to generate their bodies by themselves and after they diagnosed the disease, they started treatment for this disease and try to overcome its effects on a healthy body. Stem cells inhibit DNA damage and these cells spend a long time of their lives here, so they easily move their and help our body to survive from tumor attacks. They get divided in a proper symmetrical manner and help the body to survive itself more easily. They resist cancer or tumor cells to reach to the body and resist certain cells which attack on body to generate cancer cells. Tumor cells have opposite symmetry to stem cells to start generating cancer cells. These tumor cells some present in patient's body genetically or due to the long-term life period staying at one place may initiate the development of cancer cells in the body. As we know that cancer cells initiate and regenerate by themselves as breast cancer in women may occur due to specific type of stem cells. The process in which certain division of cells

occur and a tumor generate. In table 1 it is shown that how stem cells and cancer cells are interlinked with each other. Transfer of cancer or tumor cells to the body occur through stem cells and it is accepted in world wide. In this research we got strong evidence that cancer cells are initiated with stem cells and they are regenerated by tumor cells present in the body which cause cancer.

If we classify stem cells then we will be able to know about some certain characteristics of stem cells as they can regenerate them and have the ability of certain cells to develop layer by layer in human body but it did not penetrate into any other organ of the body. As we have mention in the table number 1 that every type of cancer cells and its type of penetration is different as it depends upon it temperature and required time, area where it penetrate and accumulate itself is different, they make different types of colonies which are also not same in numbers and location. Their in vivo appearance is also different. At certain time some of them show positive behavior and positive response but other did not show any response in specific area. In this table it is shown that how stem cells can initiate the tumor cells in the body and a little bit amount of stem cells can generate tumor cells as easily as proper cancer cells develop, so they are properly involved in the development of cancer cells in the body.

RESULTS

Resulted that there are no rules to separate out the cells which are spreading tumor cells or in short from this research they said that we are not able to separate them out but we can clarify the issue that either they are spreading this deadly disease or not. They concluded that they can grow by themselves and initiate tumor. Primarily these cells are present and them after spending a long time in anybody they regenerate themselves and start development, first they start from making small group of cells then move towards large groups of tumor cells that can cause severe type of cancers as breast cancer seen in women, colon cancer not with much percentage, brain cancer and blood cancer etc.

All these types of cancers are harmful for human health which can lead to death in most of cases. Most of the reasons of people reaching the death level is that they are less likely aware with symptoms and its causes. They did not start their treatment on proper time and face unbearable pain and most of them reached to death. Results of various studies about stem cells may be

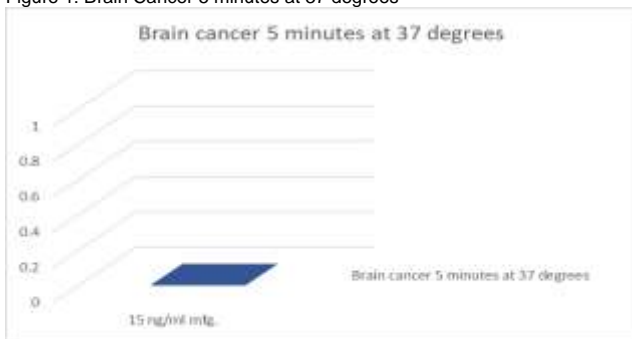
misleading as disease arise from every single cell of the stem cell but it also depends upon conditions going on. Many other studies have shown some different results as density of all cells will

increase in the start as it will be 1200/ml in the start but with further procedure its value will be lower down. When their density will be low, they will start making their colonies.

Table 1: Types of cancer and characteristics

| Type of cancer Antigen | Time and temp | Area of tumor | Colony of tumor | ALDH | Characteristics of in vivo |
|------------------------|--------------------------|---|--|------------------|----------------------------|
| Breast cancer | 95 minutes at 37 degrees | 15 n g/ml mfg. 25 n g/ml EFG Insulin 5ml | Single celled colonies are formed | Positive results | They are SCLD |
| Blood cancer | 4 hours at 37 degrees | Intraleukocytic 30 n g/ml 101 n g/ml stem cells | One sixth of colonies are formed in leukemia | Did not done | They are non SCLD |
| Colon cancer | 2-3 hours at 37 degrees | Progesterone level 6.5 n g/ml Glucose 5.6 n g/ml | Also, single celled colonies are formed | Did not done | SCLD |
| Brain cancer | 5 minutes at 37 degrees | 23 n g/ml BFG 13 n g/ml FGF | Colonies formed from 202/1.5 cells at palate | Did not done | They are non SCLD |
| Endothelial cancer | 92 minutes at 37 degrees | | | Did not done | SCLD |

Figure 1: Brain Cancer 5 minutes at 37 degrees



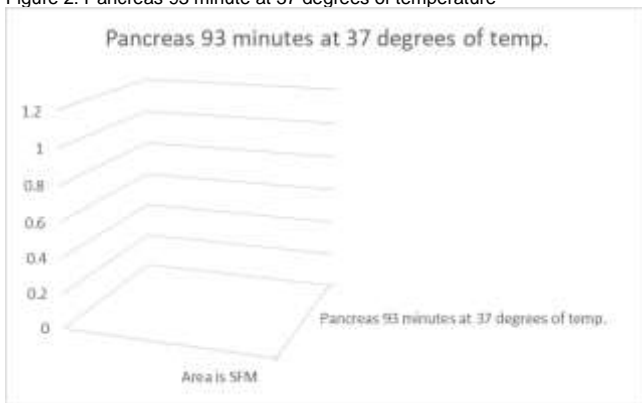
calculate the exact reason of developing these tumors. They are also still confused about the main reason of ovary cancer because not much points are getting related with the cancer stem cells [12]. By using different phenotype effects, they also take some cells from ovary to study the level of cancer cells present. They want to check out that either they are primarily present there as genetic base or got injected from out through any virus or linked with any other cells [13]. Some promoters are used to stimulate the phenotype effects. Cloning occurs in the stem cells which produce tumor cells but separating the cells of ovary and then these tumor cells after further divisions make groups and start their development [14]. It may occur due to the presence of extra cells, area where exactly these cancer cells are developing and medication or therapies [15].

Table 2: Cancer and its location

| | | | | |
|----------------|-----------------------------------|-----------------|------------------------------|--------------|
| Neck and head | CD 45* | Area is SFM | Single celled colony | Did not done |
| Prostate gland | CD112* | Area is GFP | Single celled but are coated | Did not done |
| Ovarian | CD134* | Insulin 25ng/ml | Dilute factor is limited | Did not done |
| Pancreas | 93 minutes at 37 degrees of temp. | B 26 | | Did not done |

Ovarian cancer (OC) is the seventh most commonly diagnosed cancer among women in the world. A woman's lifetime risk of developing OC is 1 in 75, and her chance of dying of the disease is 1 in 100. Cells which initiate cancer cells in the body are somehow known as stem cells. They help to initiate cancer or tumor cells in the body, after initiation further division occur and a full-fledged disease formed as cancer/tumor. These cells are not homogeneous to each other and after development they start their division into groups. These cells have several qualities which help them to grow in the body and make their roots stronger. They have characteristics as they can grow and replicate by themselves and also nourish themselves. They did not need any other stimuli to feed them. They started continuously growing and finally a tumor occurs in the human body. Different researches have done to check the main cause of cancer and how stem cells get generated. They were unable to find the reason, now another research has made to find out the reason of cancer cells which are increasing day by day in ovaries of female which we called as cancer of ovaries. Here its initiation level and characteristics will be discussed.

Figure 2: Pancreas 93 minute at 37 degrees of temperature



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DISCUSSION

Overall, it is estimated that different type of therapies should applied on it to check out the changes that occur in cells causing cancer [9]. First if we check out the link between stem cells and cancer cells, both of these are interlinked with each other [10]. Cancer cells are not able to develop in certain body without the presence of stem cells. They first attack on stem cells and handle all their activities and by using single cell they start making tumor in the body [11]. The major cause of skin ovary cancer is still understudy because most of studies are going on this issue to

CONCLUSION

It is concluded that phonetically both cancer cells and stem cells are not same. They are showing their opposite impacts. In this study we have seen that first they initiate from a single cell and then start replicating and make groups. There are many other ways through which tumor cells can generate themselves so it is not easy to say that they are growing from stem cells. We can say that these stem cells are involved in the development of many tumor cells but not totally. For further studies, all these points should be added to know the main cause of cancer. These points included as they generate by themselves and also replicate and how they start their fir development in the ovary. Therapies are also needed as either it is any chemical therapies or any other to calculate the mean value to cancer cells and their initiation area.

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